Focus®
福 科 斯

FC-7448

Installation Instruction

V 1.01

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Chapter 1 Product introduction

☆ 8 partitions: FC-7448 system can be distributed to 8 sub-zonesindependently, each of which has its own keypad and ID code.Some of the keypads can be assigned as main system keypad to control, process and arm/disarm allthe zones.

☆ Zone: FC-7448 support 248 zones, 8 of which are original ones, the others are programmable zones, any of which can follow one of all thefunctions of 15 zones.

☆ Event memory: the maximum 400 events can be displayed in FC-7216K andsaved by turns of time. For instance, arm/disarm, alarm and malfunction, 120 of which can be memorized.

☆ Keypad programming: the system can be programmed by keypad with no needof expensive handset programmer.

☆ LCD icon programming: the title of every sub-zone and zones can be set as short message less than 16 words and display on the LCD.

☆ 200 user codes: there are 200 four digits user codes, every of which can be set as super user code to program all the user codes. All the user can be assigned to different limits to bypass, test and arm/disarmexcept super users.

☆ Auto arm/arm delay: arm every zones everyday is programmable, the super user can replace auto arm time by arm delay, or assign a specific time to main control panel

☆ Public partition: one partition can be programmed as the status of all the other partitions. Only if all the other partitions armed, the public can be arm. In this way, it will protect public area and keep the sub-zones independent.

☆ Gas detector verification alarm: when the detector detects alarm signalfor the first time, the system will restore, then if thereis alarm signal occurs within the confirm time, the system will consider it as fire alarm, in this way, it can reduce false alarm and response as soon as possible.

☆ Force arming : the system can arm after bypass a group of zone according to programmable arming setting, the replier is prior

☆ 3 telephone numbers: the system supports two 20-digit number, every partition or zone has a 3-digit or 4-digit ID code, and telephone can be set its own format and chose impulse or radio frequency dialing, the second number is used to program remotely.

☆ Output: the output are fully programmable and can activate by system events , or one or two special zone of cross matrix; the output also can be usedto control otcal relay output module or programmable address output in data bus

☆ Two independent entry delay: while in zone programming, you can select either of the delay in order to set the farther one from keyboard longer time to enter

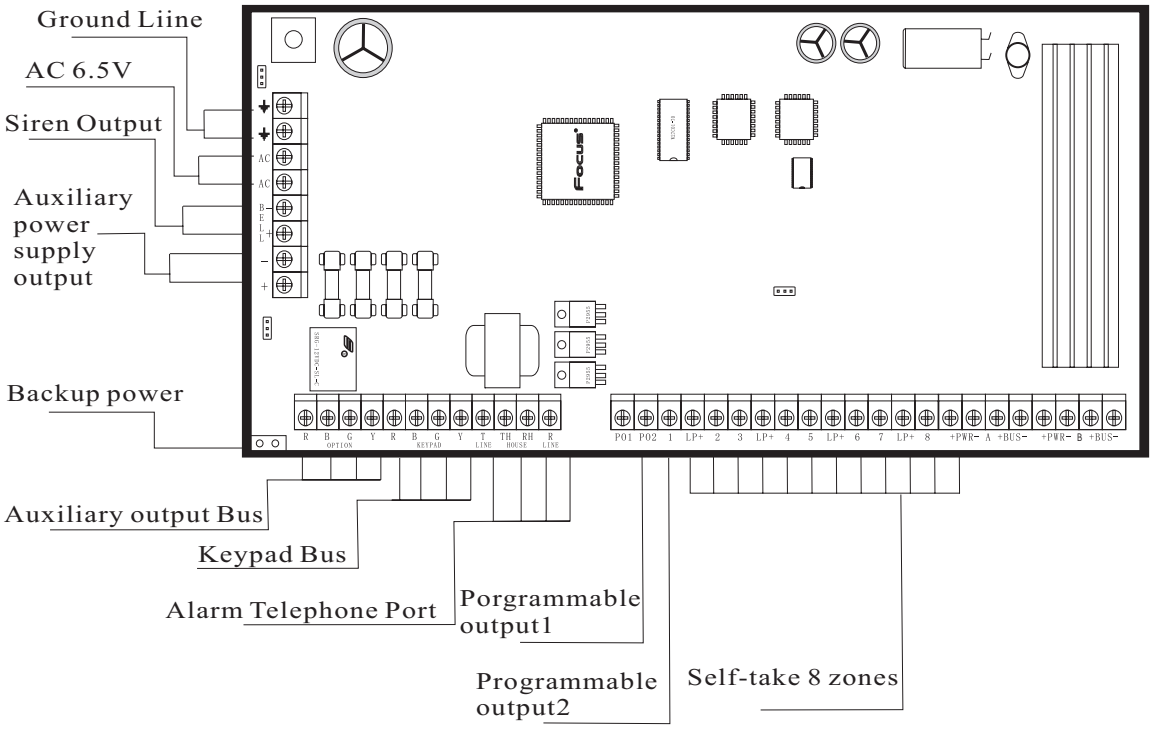
☆ Simple function key and super user interface: Enter one super user PIN, then press a function key to arm, disarm and restore gas detector

☆ Flexible data connection: the main panel is matched with most of the alarm receiver, support 4+2, contact ID etc.

Chapter 2 System Setting And Wiring Introduction

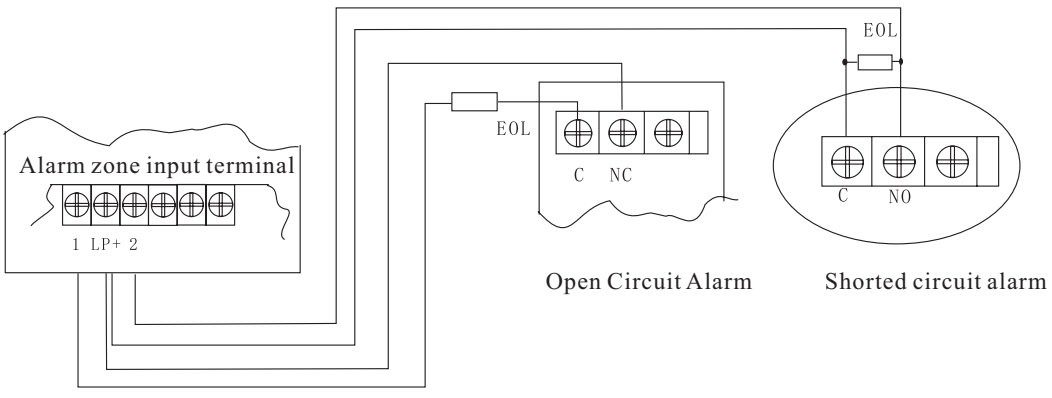
1. control panel wiring and system setting

FC-7448 is an alarm contol panel with fire and intrusion alarm system which is compatible with many kinds of stealing detector and fire alarm detector. There are 8 zones which can be expanded to 40 zones by bus system. The expandsion equipment includes 8 zone expands ion module FC-7408 and single zone expandsion module FC-7401and other infrared detector, door contact and smoke detector etc with address The bus driver can adopt FC-7430B(single bus system) or FC-7432B(dual bus system)

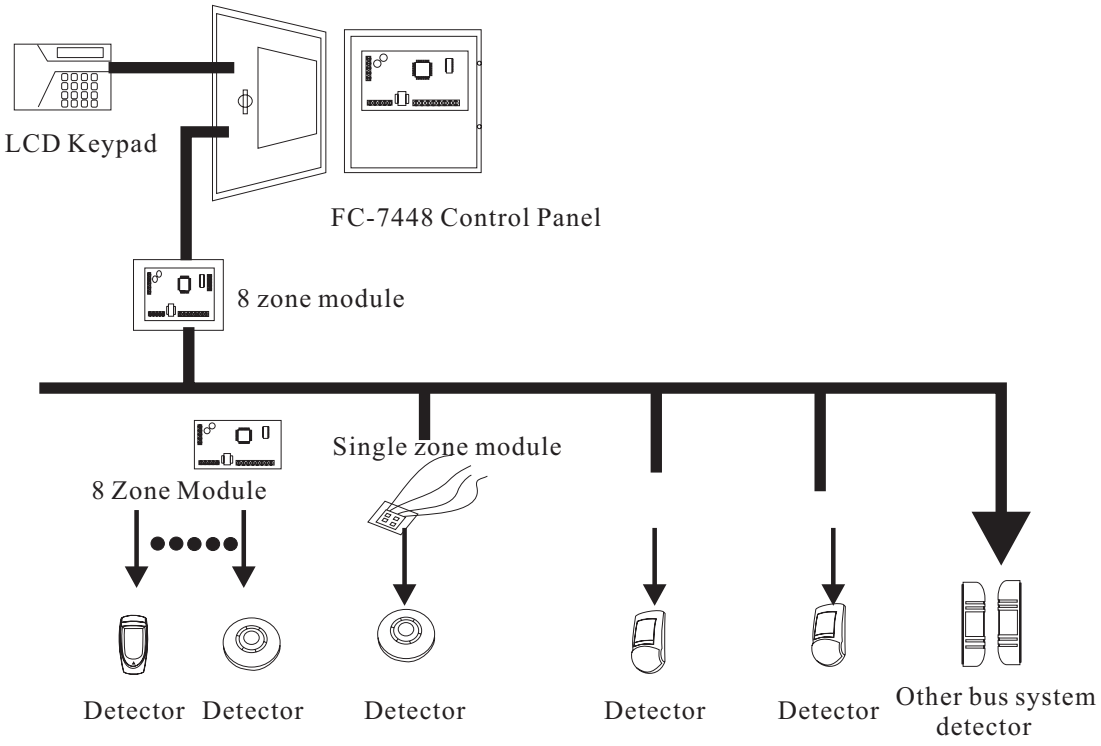


Panel wiring method

1.2 Wiring method the zone input prot and detector



Normal detector has NO or NC output(general detector is C. NO), here the diagram take FC-7448 as an example, with triggering method open or short circuit alarm The end resistors are supplied as accessory, and different control panels have different end resistors. For example, the end resistor of FC-7448 self-zoneis 2.2K, while the end resistor of expandsion module is 4.7K. Be sure not confuse it when use.



Notes:

Bus should be non-shield and non-twisted pair (RVV)

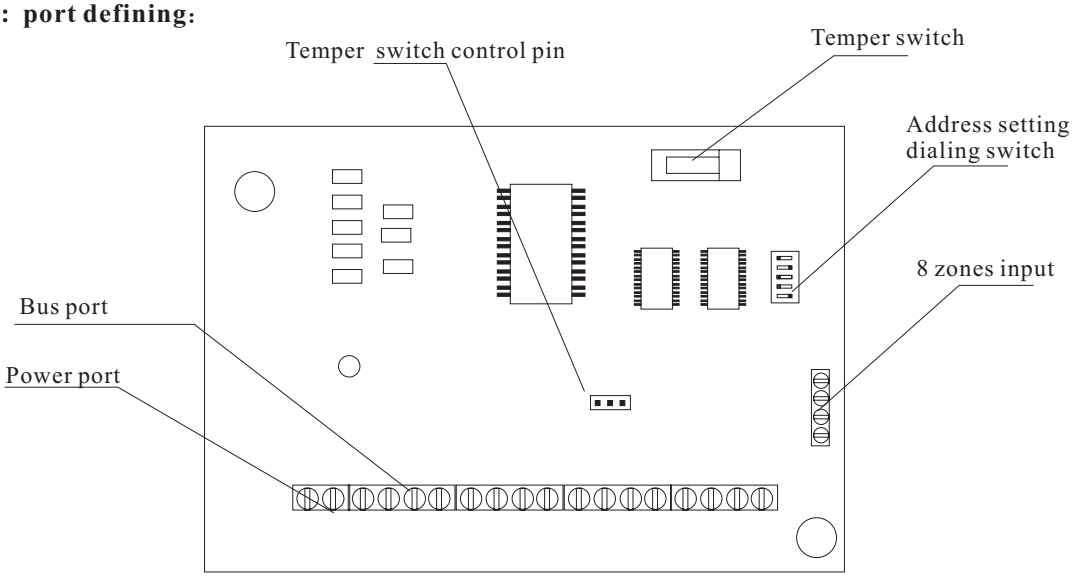
The thickness of bus results in the signal transmitting distance and quality, general main wire adopts Rvv2*1.5mm, bus and other wires are suggested to wire separately, especially visual intercom's audible wiring, in order to avoid interference. If wiring bus through , it should keep away from other wires. The max length of wire should be within 1.6 km, when it is out of the limit, bus separator can prolong the length by 1.5km(RVV2*1.5mm). The most important is to adopt more than one FC-7425, the n the bus length depends on the cable and circumstance. The wire in building is always RVV2*0.5mm according to the requirement.

2 System accessories and wiring port defining

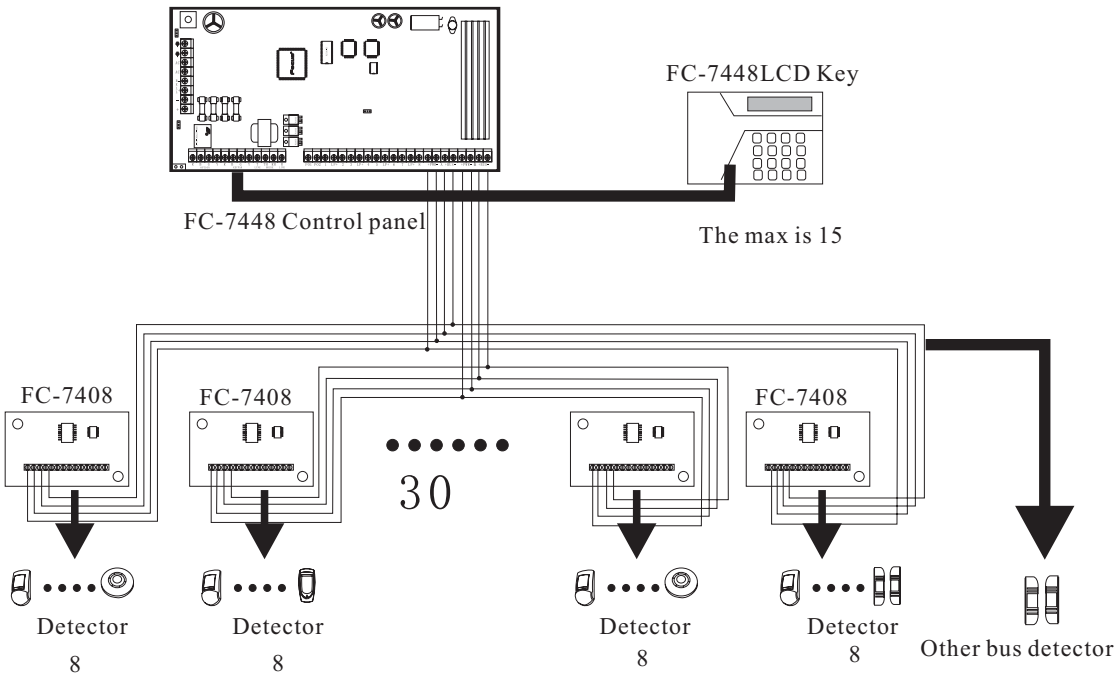
2.1 8 Zone expandsion module FC-7408

FC-7408 is a 8 zones expandsion module, which keeps 1.6m away from bus, and it has 30 self FC-7408. FC-7408 requires DC12V supplied by FC-7448 control or independently, its static voltage consumption is 10mA

A: port defining:



B.Wiring method



：Zone setting switch

FC-7408 has 8 zones, in means that the first FC-7408 expandsion zone is No. 9-16 zone, the second is No. 17-24, the third is No.24-32 etc. When use more than one FC-7408 module, please refer the method of setting dialing switch.

		FC-7408B DIP switch				
NO .	Expand zone	1	2	3	4	5
1	9---16	Open	Open	Open	Open	Close
2	17---24	Open	Open	Open	Close	Open
3	25---32	Open	Open	Open	Close	Close
4	33---40	Open	Open	Close	Open	Open
5	41---48	Open	Open	Close	Open	Close
6	49---56	Open	Open	Close	Close	Open
7	57---64	Open	Open	Close	Close	Close
8	65---72	Open	Close	Open	Open	Open
9	73---80	Open	Close	Open	Open	Close
10	81---88	Open	Close	Open	Close	Open
11	89---96	Open	Close	Open	Close	Close
12	97---104	Open	Close	Close	Open	Open
13	105---112	Open	Close	Close	Open	Close
14	113---120	Open	Close	Close	Close	Open
15	121---128	Open	Close	Close	Open	Close
16	129---136	Close	Open	Open	Open	Open
17	137---144	Close	Open	Open	Open	Close
18	145---152	Close	Open	Open	Close	Open
19	153---160	Close	Open	Open	Close	Close
20	161---168	Close	Open	Close	Open	Open
21	169---176	Close	Open	Close	Open	Close
22	177---184	Close	Open	Close	Close	Open
23	185---192	Close	Open	Close	Close	Close
24	193---200	Close	Close	Open	Open	Open
25	201---208	Close	Close	Open	Open	Close
26	209---216	Close	Close	Open	Close	Open
27	217---224	Close	Close	Open	Close	Close
28	225---232	Close	Close	Close	Open	Open
29	233---240	Close	Close	Close	Open	Close
30	241---248	Close	Close	Close	Close	Open

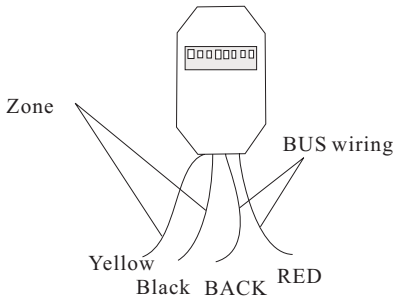
;Please preset how many zones to expand , how many modules to use, and distribute to which zones (see the programming part)

The dialing switch should be precise, the end resistor is 47 k

2.2 Single zone expansion module FC-7401

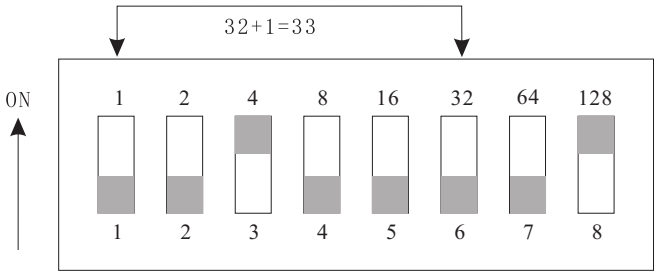
FC-7401is single module with high stability and flexibility. Before installation, the dialing switch will set the zone number, without additional power supply, and the static power consumption is 350uA. FC-7401 is suitable for perimeter circumstance.

A：Wiring port：

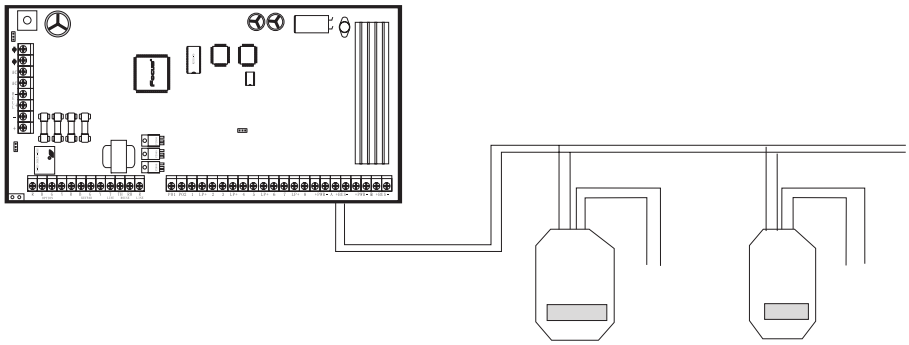


B：Method of setting address code

FC-7401 has 8 groups of manual dialing switches to set zone number. The step is to add the number on the switch, the result is zone number. Also push the relative switch to ON position

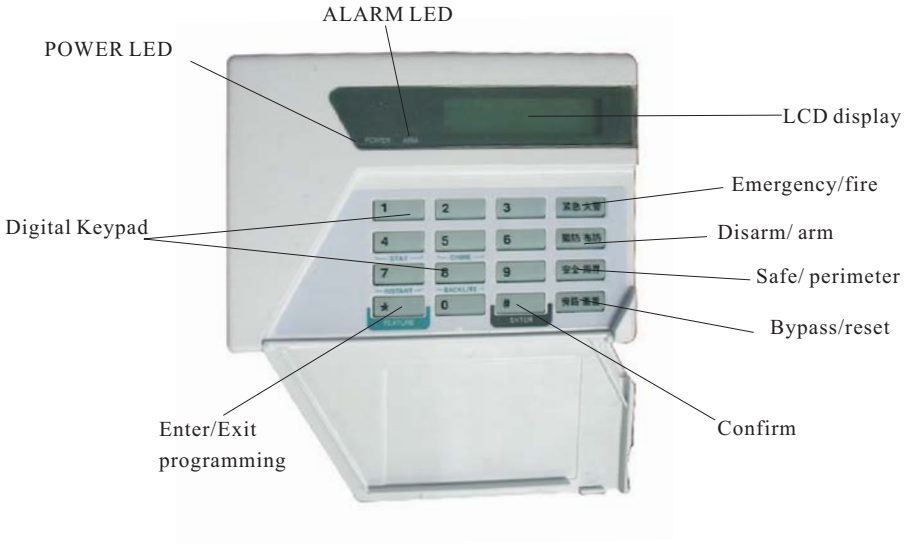


C：Connect with control



Chapter3 Normal Using And System Setting

1.Keypad



1.2 Keypad indicator

Indicator	OFF	Flashing	ON
armed(RED)	System is armed	Exit delay or alarm	System is armed
armed(Green)	Arming is activated	Zone is bypassed	System is ready
power(Green)	Power is cut off	System is defective	Current is normal

Control the keypad buzzer volume: press"1" and "*" simultaneously to increase, then press "4" and "*" simultaneously to decrease

1.3 Method of arming

Before arming, the system should be prepared well, the keypad LED "POWER" and "ARM" should light on and the LCD displays "arm is ready Ready to Arm Area ".

If there is a indicator is not on, the LCD will display "Arm is not ready", please read "Force arm" and "Zone bypass".

There are 5 standard arm method listed as follow chart: Not Ready Area

Arm type	Operation	Response	Solution
Nromal Arm (Nobody at spot, entry/exit delay active)	Superuser password [1234] + "Arm"	1.Red LED flash 2.FC-7216K keypad display"(Armed)" 3.Within exit delay period, FC-7216K displays (Exi t Now)"。 4.Beep。 5.Red LED on when exit delay expire	Exit within exit delay period
Peimeter arm (Somebody at spot, entry delay is unefficient)	Supter user password [1234] +"security" + "perimeter"	1.Red LED flash 2.FC-7216K key displays "(Perimeter Inst)" 3.Within exit delay period FC-7216 keypad displays "(Exit Now)" 4.Green LED is on 5.Beep。 6.Arm the protection zones 7.Red LED is on when exit delay expires 8.Yellow LED is on when exit delay expires	Move freely within protection area
Perimeter arm (Nobody at spot, ectry/ exit delay is active)	Super user password [1234] + "Perimeter"	1.Red LED flashing 2.FC-7216K keypad displays "(Perimeter On)" 3.Within exit delay period, FC-7216K keypad displays "(Exit Now)"。 4.Green LED is on 5."Beep" 6.Arm outdoor protection zones 7.Red LED is on once exit delay expires 8.FC-7216K keypad yellow LED is on once exit delay expires	Move freely in protection area
Special arm (the program address is 0183 0183)	Super user password [1234] + [#] + [4]	1.Red LED flashing。 2.FC-7216K keypad display (On Partial)"。 3.On exitdelay, FC-7216K display "(Exit Now)"。 4.Green LED is always on。 5.Beep。 6.Red LED is on when exit delay expires。	Exit within exit delay period
Max security arm (nobody at spot,entry delay is unefficient)	Super user password [1234] + "security" + "arm"	1.Red LED flashing 2.FC-7216K keypad display " (Armed Instant)" 3.During exit delay period, FC-7216K keypad display "(Exit Now)"。 4.Beep 5.Red LED is on once exit delay expires	Exit within exit delay **Warning: do not disturbe zone once exit delay**

1.4 Disarm /delete alarm

Please read solution part in case of emergency occuring。 If there a pre-alarm indicator while entry, please disarm as following chart.

Warning: If bell or siren sounding, or red LED for armed flashing, the keypad will alarm before people arriving. FC-7216K will display “（Zone Alarm）”. During entry delay, keypad will sound impulse, not continuous sound as usual. If the alarm address is not confirmed, keep away from zone only if along with right person.

Disarm	Operation	Response
Disarm	Super user password [1234] + [Disarm]	Red LED off Pre-alarm indicator off
Delete alarm	Super user password [1234] + [Disarm]	Alarm stop When alarm stops,FC-7216K keypad will disply “(SounderSilenced)” till system restore

1.5 Force arming

If there is malfunction or FC-7216K display"Not ready", user can force arm the system by bypassing malfunction(if programmed).

Force arming when current cut: if current cut, it is not allowed to arm as usual, force arm as a warning to show the control panel using backup battery.

Warning: force arming or bypassing skip some protection steps as it disregarding violated zones when arm, so some signal will not be detected or delay. As a result, it must release unneccessory defection (closed door or windows)。If can not, please contact with installation company

Note: If there is malfunction, please refer to “Zone bypass” part

Command Sequence	Response	Probable Solution	Response
Enter code to arm, master user password + “Arm”	The keypad will display as follow after beep for 5s “ To force arm press BYPASS ” There is trouble zone in control panel, if there is three wrong voice, it means that it is unacceptable or not allowed force arm	Press "Bypass" for 5s when beep	The keypad will display as follow during exit delay and the red arming indicator “ On Partial Area X Control Trouble ” There will be bypass trouble zone, it means unacceptable or not allowed force arm when there is three wrong voice

1.6 Zone bypass

Before arming, it need to bypass some zones temporarily.
For example:a open window will cause FC-7216K display "Not ready" Only bypass one zone every time, so user need to operate one by one.

Bypass type	Operation command	Response	Solution
Bypass violated zones	Super user password [1234] + [bypass][xxx] (zone Number)	If zone not intervened "ARM" indicator will flash	When arming, it need to bypass input zones
Display bypassed zones	Superuser password [1234]+[bypass]	FC-7216K keypad display " Bypass" and bypassed zone No,	
Delete single bypassed zones	Superuser password [1234]+[bypass][xxx] (Zone Number)	Delete single bypassed zone	
Delete all the bypassed zones	Superuser password [1234]+[bypass]+[*]	Delete all the bypassed zone	

Note: 1.Read "force arm" part to gain other methods of bypass

2. Zone Number should be 3-digit, for example, 002,003，063，122，etc

3. When system armed, except for 24- hour zone, the bypassed zones should be deleted. When delete 24-hour zone bypass , user can adopt either of the above method. If bypass zone on keypad, it is necessary to adopt single partition method.

2. System settig

2.1 Changing the date

For example: change the date to "12/17/2006" as following chart:

Steps to change the date	Command sequence	If Accepted, the Display Reads
Enter the superuser password	[1234]+[#][0]	0，1，2，3，4，6，8 setting
Enter "2"	[2]	Enter month (01…12）
Enter the month "12"	[12]	Enter Day(01…31)
Enter the date"17"	[17]	Enter year(XX) and press "#"to confirm
Enter the year "06"	[06]+[#]	"Month，Date，Year" A long beep signifies acceptance

2.2 Changing the Temporary PIN Expiration Dta:

This chart explais the produre for changing the expiration date (for temporary PIN) at the keypad

For example: change the date to "06/06/2006" as following procedure:

Steps to Change the exp Date	Command Sequence	If accepted, the Display Reads
Enter superuser password	[1234]+[#][0]	0，1，2，3，4，6，8
Enter setting code "3"	[3]	Enter month (01…12)
Enter thedate "06"	[06]	Enter Day(01…31)
Enter the month "06"	[06]	Enter year(XX),and press "#" to confirm
Enter the year "06"	[06]+[#]	"Month, Date, Year" A long beep signifies acceptable

2.3 Changing the time

For example, change the time to "4:23 PM, Wednesday" as following procedure:

Steps to change the time	Command Sequence	If acceptable, the display reads
Enter superuser password	[1234]+[#][0]	0，1，2，3，4，6，8
Enter time setting code "6"	[6]	Enter Day (1…7)
Enter the day "4"	[4]	Enter Time(0100…1259)
Enter time "04" "23"	[04] [23]	Enter AM/PM(4/6),and press "#"to confirm
Enter AM or PM Enter "6"	[6]+[#]	"Enter Day(1...7)，Time，AM/PM" A long beep signifies acceptances

Note: 1. The day should between 1to 7, "1" for Friday, "2" for Monday, etc.

2. "Enter Time(0100…1259)", "0100" for "hour", "1259" for "minute"

2.4 Automatic arming

Each partition can be programmed to automatically arm once per day.

To inform occupants that the system is about to arm, a pre-arming period will begin before the system arms automatically. The keypad sounders, and any outputs programmed to follow the keypad sounders, will pulse five times every minute if programmed to do so. During the last five minutes before arming, these sounders will be on steady. Once per minute the keypad will read,"Arm in NN min/PIN+OFF-extend" If automatic arming is used to in Master Keypad mode, it will affect all the partitions you have access to. If used in single partition mode, or from a single partition keypad, it will affect only the partition you are working in. During the pre-arming period, perform the following steps to set delay arming:

Steps to changing time	Response
Enter superuser password	[1234]
Press "Disarm"	Arming time will be pushed to 30mins later, a new pre-arming period will begin 15mins before the system armed automatically

Setting the Automatic Arming Time as following:

Setting the Automatic Arming Time	Sequence	LCD Displaying
Enter Master PIN +[#][0]	[1234]+[#][0]	0，1，2，3，4，6，8 setting
Enter a "1" to enter the Automatic Arm Setup programming	[1]	Sunday -- 00：00
Enter Partition number Press [#] to exit	[X]+[#]	If programming is done from a Master Keypad that is not in single mode, the user will be prompted to enter the partition they wish to program 。
Enter a time for each day. Enter I [0][1][0]03]	[00]：[00]+[#]	The display will start with Sunday. It will read, "Sunday-nn". Enter the time in 24 hour format then press the [#] key. If you make a mistake, press the [*]key twice to move back to your last entry For example: 12 midnight =2400# 12 noon=1200# 12:01 =0001# 12:01 pm=1201# 1:00 am = 0100# 1:00pm =1300# Disable =0000#

2.5 Setting Delayed Arming

Delayed arming is to arm the system after a specified number of hours

For example: arm the system after three hours

Steps to change time	Command	The Display Reads
Enter superuser password+[#][99]	[1234]+[#][99]	Arm in 00 Hours # to accept
Enter the number of hours to delay arming "03"	[03]+[#]	A long beep signifies acceptance

Note:

1.Delayed arming can be used even if there are no automatic arming times programmed. If programme the delay arming at master keypad, it will affect all partitions you have access to. If used in single partition mode, or from a single partition keypad, it will affect only the partition you are working in.

2.Delay arming will override automatic arming

3.Delay arming will also provide a 30 minute pre-arm period like the one provided with automatic arming.

2.6 Setting Automatic disarming

Each partition can be programmed to automatically disarm once per day

To programme the Automatic Disrming Time, perform the following steps：

Steps to changing expiration date	Command	If acceptable, the display reads
Enter superuser password	[1234]+[#][0]	0，1，2，3，4，6，8
Enter Automatic disarming code”4”	[4]	Sunday -- 00：00
Enter partition No and press "#" to exit	[X]+[#]	If the programming keypad is not single partition format, user should enter which partition to programme.If keypad is single partition format, please skip it.
Enter time for disarming Automaticlly	[00]：[00]+[#]	Display will start from Sunday, it will read " Sunday-hour:minute",input time and press"#" to continue the next day, press"*" two times return to previous day For example: Noon12:00 =12:00# Midnight 12 :00=24:00# AM 12:01=00:01# PM 12:01=12:01# AM 1:00=01:00# PM 1:00=13:00# Cancel = 00:00#

2.7 Setting user password

2.7.1 General Information

1.(User Number)：it is used to identify user's number, the maximum number is 200(001-200)
2.(PIN)：it is 4-digit code users must enter at the keypad to gain access to the system
3.(Authority Level)：this number determines which function each it will be able to perform
4.Your system has the capability to assign up to 200 PIN, each four digits long. Each User Number can have only one PIN assigned to it. Attempting to assign the same PIN to multiple User Numbers will result in the three-beeperror tone, and the entry will not be made.
5.User Number 001is designed as a Master code. It can be used to add, delete, or change other PIN. It will always have access to all partitions regardless of how it is programmed.
6.Users Number 001is shipped from the factory with the PIN of 1234.This PIN can be changed to one of your personal preference and must be programmed as a Master code

Warning: PIN should never be programmed with common sequences such as 1234 ,1111, or 2468 because they are easily violated.

2.7.2 Changing PIN

This chart will explain how to change PIN

For example：set"028"as the Unlimited User Number in third partition, and PIN is “2005” as following：

Steps to change a PIN	Command Sequence	If accepted, the Display will Reads
Enter superuser PIN	[1234]+[#][0]	0，1，2，3，4，6，8
Enter specified code “0”	[0]	Enter User NO. (001…200）
Enter user number	[028]	Enter Authority level(0…6)
Enter the User Number	[1]	Enter Area(s) Or “#” Of All
Enter the Area(s)/partition(s) this user has access to and press”#” to confirm	[#]	Enter Next Area End With # Enter PIN
Enter the PIN	[2005]	Enter PIN again End With #
Enter the PIN again followed by the “#”key	[2005]	

2.7.3 Authority Limits

★ “0”=Super user：Can enter all commands, add or change PIN s in assigned partitions, change time and date, bypass, arm, disarm, perform system tests, system reset, and view history. Any or all PIN can behave as a Superuser “1”=Unlimited: Can enter all commands, bypass, arm, disarm and perform system tests. Can not change PIN

★ “2”=General: Can bypass, arm, disarm. Can not change PIN and reset system, or enter command 7 or any of the command 8 functions. Bypass and disarm are programmed by partition.

★ “3”=Arm Only：Can arm the system only. Can not perform any other functions including disarming.

★ “4”=Temporary：Valid only for a specified time(PIN will disappear upon expiration date). Can arm or disarm the system, but can not perform any other functions. If this function is performed from a Master Keypad, you must be in Single Partition Mode

★ “5”=Duress：When the system is disarmed using the duress PIN, a silent report is sent to the central station. The Duress PIN is intended to be used when the user is forced to disarm the system

★ “6”= Access：When a PIN with an Access code is entered, any output programmed for Access Output will pulse on for 10 seconds.

2.8 System Test

2.8.1 Zone Test

The Zone Test is used to confirm that detectors will report alarms. System test works on all zones, except24-hour zones and fire zones. During the test, keypad not report alarm.

Type of Test	Command	Response	Solution
Zone Test	Super user （PIN） + [#][81]	FC-7216K keypad display: “ (Test Zone)” followed by the zone number of any zones that have not been tested FC-7216K keypad display： “(Now Testing)” followed by the zone number of zone that is currently being tested. It returns to “(Test Zone)” after violation。	Test each detector one at a time as instructed by the installing company To exit the Zone Test mode ,enter your PIN+#

Note:This test not be performed from a Master Keypad

2.8.2 Communication Test

This test is available only if the system has been programmed by the installing company to permit communicator test. A long beep will initially sound to acknowledge the start of test. If the test is successful ,t he souner will return to arm status .To silence the sounder, enter your PIN followed by"#"key or press "*"

Test Type	Command	Response	Solution
Required address 0329,0504,0529 ,1521	Super user （PIN） + [#][82]	1.A long beep will sound。 2.A “Test” report is sent to the monitoring service	If the test fails, the keypad sound will sound continuously To silence the sounder, press the "System Reset" key **Note: This test will take several munites to complete as the control will try 10 attempts before it fails this test**

2.8.3 Event History Readback

The History Buffer stores the last 400 events in memory, the most recent 100 are stored in non-volatile memory(will be kept even if total power loss) FC-7216 keypad can display as following:

Test Type	Command	Response	Solution
Event history readback*	Super user （PIN） + [#][89]	FC-7216K keypad display the most recent events	FC-7216K keypad: press[9]、 [6] and [#] key, it will display all of the events Press “*” to exit

Note:1. “*” Means that it should be in Single Partition Mode if this test is performed at master keypad

2.FC-7216K keypad : It will display all the history events. Press”#” to start and continue to read back the next event. The”9” key will scroll you back through the history line by line. The “6” key will scroll you back up through the events by events. Each event consists of two or three lines or display screen. The first line/ screen will be the event title and user. The second line/screen will be the date of the event or the change being made. If there is third line/screen, it will be the date of the change. To exit the Event History Mode, press the “*”key or wait 20 seconds and the keypad will exit automatically. When performing this from a Master Keypad, each partition will display its own history.

Chapter4 Programming

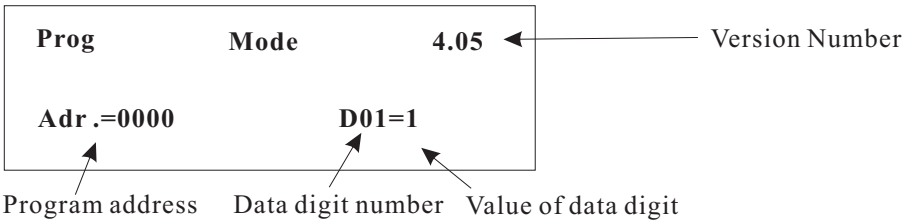
4.1 Entering the Programmer's Mode

To enter the Programmer's Mode, enter the system password followed by "#" and "0". Shorting the program pads on the control panel will also activate Programmer's Mode. The default system password is：[9][8][7][6]

4.2 Reading back a Program Address

Once you are in the programmer's mode, to read back the value of a Program Address, enter that Program Address followed by"#". Each data digit is displayed one data at a time. To view the second data digit, enter the "#"button again.

The display will look like this:



4.3 Enter in a value in a Program Address

To enter a value in the Program Address, enter the Program Address, then enter the value for each Data Digit, then enter "#" to save it and move on to the next Program Address. Entering data digit 1 will increment you to the next data digit.

The display will show the Program Address

and will display the value of each Data Digit afer you enter it. The data will be saved when you press the "#" key. The control panel will automatically increment to the next program address

If you wish to program that next address, enter the necessary information.

If you wish to read back the value of that address, press "#" key

If you wish to program a different address, press "#'key two times and enter the program address you wish to program.

If you make a mistake at any time, press the "*'key two times. This will clear the display, allowing you to enter the program address you wish to work with..

Note: Entering HEX Values

Some data values will be higher than 9. These values must be programed by pressing the "#" key followed by some other number. These values will display as HEX characters(A-F) when entered. Example: entering "*" "0" at the keypad will display an "A".

The HEX character values are as follows:

*0=A	*1=B	*2=C	*3=D	*4=E	*5=F
（10）	（11）	（12）	（13）	（14）	（15）

4.4 Default

The FC-7448 is shipped from the factory as a working, pre-programmed control. Many of the programming address may already be set to the values you need. The default values are shown in Reverse Print If the value you woule like is in Reverse Print, you do not need to pre-program this address. In the example below, a "0" is the default value:

	0	1	2	3	4	5	6
Feature1	◆			◆	◆		◆
Feature2		◆		◆		◆	◆
Feature3			◆		◆	◆	◆

If the default is not shown in reverse print, it will be shown in a separate table.

4.5 Setting the Control to the Factory Default

Only enter [0][1][#] in Program Address 4058 when you are completely sure you want to erase all installer programming. Entering [0][1][#] in Program Address 4058 will immediately reset the control to the factory default. Any programming already done by the installer will be erased.

Waring: This action can not be reversed.

4.6 Exiting the Programmer's Mode

To exit the Programmer's Mode, press the "*" for a minimum of 4 seconds. If not keypad entries are made for 4 munites, the control panel will automatically exit you from the Programmer's Mode

4.7 Understanding the programming charts:

The Programming Reference Guide makes ususe of three types of charts. Each is decribed below

If the chart looks like this, a combination of feature is available to be programmed for that particular address.

	Enter the Data Digit as a :							
Select	0	1	2	3	4	5	6	7
Option1	◆		◆		◆		◆	
Partition2		◆		◆		◆		◆
Partition 3			◆	◆			◆	◆
Partition4					◆	◆	◆	◆

Enter one of these numbers for the appropriate data digit

Identifies the options/features availbale for this address

" ◆ " represents which options/feature are included with each selection
For example: To select Feature 2 only, enter the data digit as a 1 To select Feature2 and Feature 4,enter the data digit as a 5

If the chart looks like this, only a feature is available to be programmed for that particular address.

Represents the option/feature available for this address.
Example: To select Disabled, enter the data digit as a 0.To select Entry/Exit Delay#2, enter the data digit as a 4

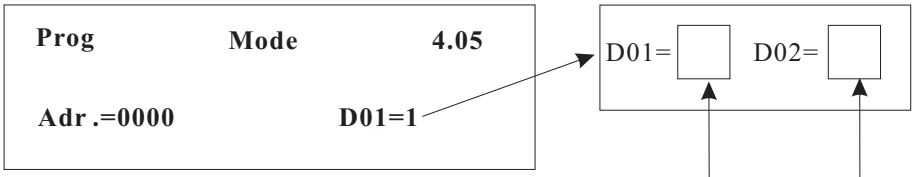
Select Option	Data
Cancel Function	0
Perimeter Instant Zone	1
Exit/Entry Delay zone1	3
Exit/Entry Delay zone2	4

Enter one of the numbers for the appropriate data digit

Default chart that looks like this:

Zone Function	Address	Default
1	0001	23
2	0002	24
3	0003	21

Entering data digits in Prograrmming Address



	Data							
Select option	0	1	2	3	4	5	6	7
Perform1	◆		◆		◆		◆	
Perform2		◆		◆		◆		◆
Perform3			◆	◆			◆	◆
Perform4					◆	◆	◆	◆

	0	1	2	3	4	5	6
Perform1	◆			◆	◆		◆
Perform2		◆		◆		◆	◆
Perform3			◆		◆	◆	◆

Chapter5 System Programming

5.1 General Control Programming: Program Address（0000）

General control programming defines the system-wide general operating parameter

Example: To program the system-wide General Operating parameters as: allowing Normal and Custom Arming. Operating at 50Hz, and to Restore when a Zone restores.

Refer the data in following char to program：D01=3 ， D02=1。

To enter programming mode：[9 8 7 6][#][0]

Enter Program Address：[0 0 0 0]

Enter data digit01：[3]

Enter data digit02：[1]

Confirm：[#]

	Entering Data															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	*0	*1	*2	*3	*4	*5
Normal and Custom Arming	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆	◆	◆	◆
Perimeter Instant Arming	◆	◆			◆	◆			◆	◆			◆	◆	◆	◆
Perimeter Arming	◆	◆			◆	◆			◆	◆			◆	◆	◆	◆
Max Security Arm	◆	◆			◆	◆	◆	◆	◆	◆			◆	◆	◆	◆
Answering Telephone Setting					◆	◆							◆	◆		
It will alarm when there is malfunction in silent alarm zone									◆	◆	◆	◆	◆	◆		
Work Frequency: 50HZ		◆		◆		◆		◆		◆		◆		◆		
Work Frequency: 60HZ	◆		◆		◆		◆		◆		◆		◆		◆	◆

D01 D02

	Entering Data					
Select Option	0	1	2	3	4	5
System reset if buzzer silence	◆		◆		◆	
System reset if zone reset		◆		◆		◆
Zone reset when disarm			◆	◆		
Flexible bypass					◆	◆

Note:1. Normal Arming=”PIN”+”ON”, if programmed, Normal Arming arms the entire system while allowing entry delays for entry/exit zones

2.Perimeter Instant Arming=”PIN”+”No Entry””Perimeter Only”：if programmed, Perimeter Instant Arming arms only the perimeter of the system and doesn’t allow entry delays for entry/exit zones

3.Perimeter Arming= “PIN”+”Perimeter Only”, if programmed, Perimeter Arming arms only the perimeter of the system and does not allow entry delays for entry/exit zones.

4.Custom Arming= “PIN”+”#””4”, if programmed, Custom Arming allows custom arming of the system and bypass the zone functions specified in program address 0183

5.Maximum Security Arming= “PIN””No entry””On”, if programmed, Maximum Security Arming arms the entire system and does not allow entry delays for entry/exit zones

5. 2 Programming the Zone Function：Program Address（0001~0030）

A zone Function is the description of how a zone will behave. Up to 30 different Zone Functions may be programmed. You may use the default values(which are already programmed into the panel) and skip this step, change the defaults or add new Zone Functions

Example: To program Zone Function as: Steady Alarm Output, Alarm on Short, Trouble on Open , Perimeter Instant Arming

Data Digit1="6", Data Digit2="7"

Enter Programmer Mode：[9 8 7 6][#][0]

Enter Program Address：[0 0 0 1]

Enter Data Digit 01：[6]

Enter Data Digit 02：[7]

Confirm：[#]

	Enter Data Digit											
Select Options	0	1	2	3	4	5	6	7	*2	*3	*4	*5
Invisible Alarm	◆				◆				◆			
Steady Alarm Output		◆				◆				◆		
Pulsing Alarm Output			◆				◆				◆	
Alarm On Short				◆				◆				◆
Alarm on Open	◆	◆	◆	◆	◆	◆	◆	◆				
Short/cut circuit trouble	◆	◆	◆	◆					◆	◆	◆	◆
work frequency 50Hz					◆	◆	◆	◆				
work frequency 60Hz									◆	◆	◆	◆

D01 D02

Select Options	Data
Delete Function	0
Perimeter Instant	1
24 Hours Zone	2
Exit/Entry Delay 1	3
Exit/Entry Delay 2	4
Internal Exit/Entry Follow	5
Internal Stay/Away	6
Internal not instant	7
Day Monitor	8
Arm/disarm Zone	9
Fire with verification	*0
Fire without verification	*1
Delete Exit/Delay Delay 1 zone	*4
Delete Exit/Entry Delay 2 zone	*5

Note: when Data 02 value is "9", Data digit 01 represents as follow

Select Option	Data
Single zone arm/disarm（can not force arm）	0
Single zone arm/disarm（can force arm）	1
All the zone arm/disarm（force arm is not allowed）	2
All the zone arm/disarm (Force arm is not allowed）	3

Zone Function	Address	Default	Meaning
01	0001	23	Steady alarm output，alarm on short or on open，Entry/exit delay
02	0002	24	Steady alarm output, alarm on short and open，Entry/exit delay2
03	0003	21	Steady alarm output, alarm on short and open, Perimeter instant alarm
04	0004	25	Steady alarm output, alarm on short and open，Interior entry/eixt follower
05	0005	26	Steady alarm output, alarm on short and open, interior homeaway
06	0006	27	Steady alarm output, alarm on short and open, interior instant
07	0007	22	Steady alarm output, alarm on short and open, 24-hour zone
08	0008	7*0	Pulse alarm output , alarm on short/open trouble on open，Fire zone with verification

Note: Other zones function are all instant alarm, alarm on short and open, perimeter instant

Chart1: Zone function Default

5.3 Zone programming: Program Address（0031~0278）

5.3.1 Steps to program zone

★confirm zone function

★ determine which zone has which type of function

★ Determine the zone specification （adopt which type of expansion）

We suggest that you record all the zones need to program in case of confusion

5.3.2 Zone Programming

FC-7448 has 248 zones，program address is （0031-0278），each address has one relative zone .

For example: set the No.22 zone belonging to Partition 1 followed by zone function 1 inputting D01=0，D02=1。

Enter Programmer' Mode：[9 8 7 6][#][0]

Enter Program Address：[0 0 52]

Enter Data digit 01：[0]

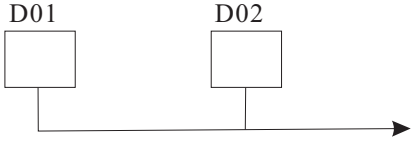
Enter Data digit 02：[1]

Confirm：[#]

★ Zone Default

Zone No.	Address	Default
1	0031	01
2	0032	02
3	0033	03
4	0034	04
5	0035	05
6	0036	06
7	0037	07
8	0038	08
9-248	0039-0278	00

There are 248 zones from Address 0031—0278，each of address has two data digits represents：

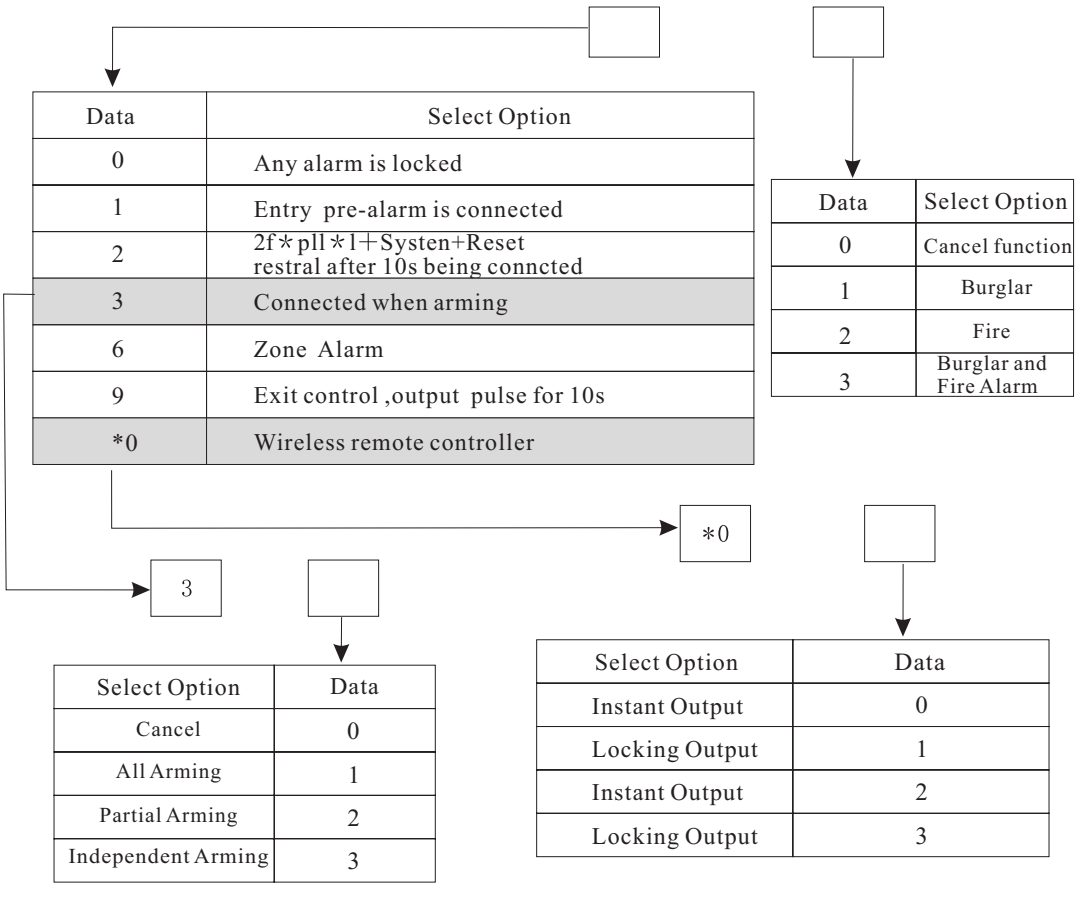


Zone Function No	Program Address	Default
01	0001	23
02	0002	24
03	0003	21
04	0004	25
05	0005	26
06	0006	27
07	0007	22
08	0008	7*0
09-30	0009-0030	23

Zone Function No.（01—30）

5.4 Output program（2734~2736）

There are three programmable outputs on FC-7448 control panel:, Bell/ Output1/Output2 system status output and event output not followed by system event。program as follow：



Each output address:

Output	Address	Default Value
Bell	2734	63
Output 1	2735	33
Output 2	2736	23

FC-7448 the Bell output is used to output alarm indicaition （input data 633）。

Note: if use commercial fire alarm, it is always supplied by Output 22, and it can restore detector by enter PLN+"Reset" once fire alrm output alarm signal

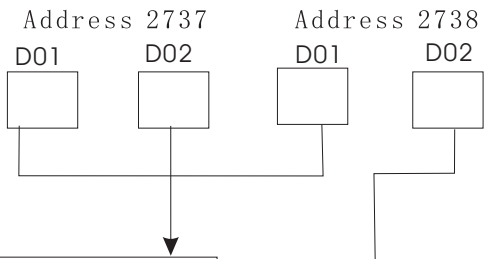
5.5 Output followed by partition setting（2737—2738）

FC-7448 can be distributed to eith partitions, the three outputs can be programmed to follow with relative output on one partition

Output and Address

Outputs	Address	Default
Bell	2737（Digit 1）	8
Output 1	2737（Digit 2）	8
Output 2	2738（Digit1）	8

Note: the digit of address 2738 should be 0



Entering Data	Option
0	Belong to Partition1
1	Belong to Partition2
2	Belong to Partition3
3	Belong to Partition4
4	Belong to Partiton5
5	Beong to Partition6
6	Belong to Partition7
7	Belong to Partiton8
8	Belong to all Partiton

Wireless Remote	
Data	Option
0	Cancel
1	BELL output
2	Output1
3	Output2

Example: To set output （BELL）follow fire burglar alarm output in partiton 2 as follow:：

Enter :[9876][#][0] （Enter Program Mode）

Enter :[2734] [63][#] （enter 63 at address2734 to follow fire/burglar alarm）

Enter :[**]（Press "*" two times to input address once again）

Enter :[2737][18][＃]（enter 1 in first data digit on Address 2737 to show Bell belong to Partition 2）

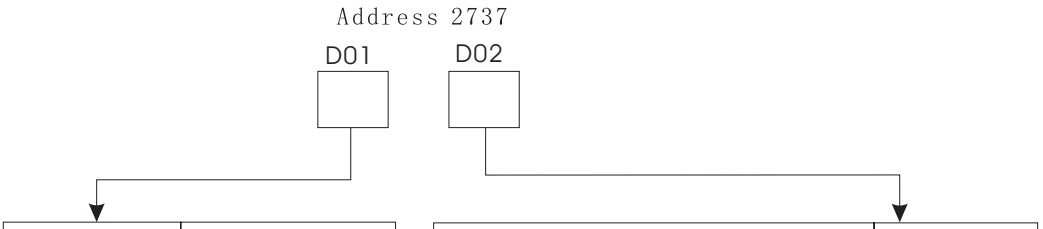
Press "*" for 5 seconds to exit

5.6 Partition Programming

FC-7448 can be distributed to eight partiton s with function zones which arm/disarm independently. Before programming, three factors should be determined, the number of zone s need to programmed ,if public zone exits, and ,

5.6.1 To determine the number of zones the system will operate, and if there is public partition programming address(3420)

Public partition is the zone can be armed only if other relative zone armed, while other relative zones can be disarmed only l if it disarmed In address 3420, the first data digit represents the number of zones, the second data digit determine the relation between public zone and other zones. It is need not to set public zone if without special requirement by not entering value in second data digit.



Entering data	Meaning
0	Partition 1
1	Partition 2
2	Partition 3
3	Partition 4
4	Partiton 5
5	Partiton 6
6	Partition 7
7	Partiton 8

Option	Entering data
No public partiton	0
Zone1 is the public zone for Zone2 and zone.3	1
Zone1 is the public zone for zone 2 to zone 4	2
Zone1 is the public zone for zone 2 to zone 5	3
Zone1 is the public zone for zone 2 to zone 6	4
Zone1 is the public zone for zone 2 to zone 7	5
Zone1 is the public zone for zone 2 to zone 8	6

5.6.2 To determine which zone belonged to which partiton（0287-0410）

It means that there are 248 zone totally and 8 independent partitions, then you need to distribute all the zones to 8 partitions from address 0287 to 0410, every of which has two digits on behave of 248 zones. If enter different data value to every data digit, it represents the zone belong to relative partition.

Address	Data digit1	Data digit 2
0287	No.1 zone	No2 zone
0288	No.3 zone	No.4 zone
0289	No.5 zone	No.6 zone
0290	No.7 zone	No.8 zone
. . .	. . .	. . .
0410	No.247 zone	No.248

D01 D02

Data	Representation
0	Partition 1
1	Partition 1
2	Partition 1
3	Partition 1
4	Partition 1
5	Partition 1
6	Partition 1
7	Partition 1

Data	Representation
0	Partition 1
1	Partition 1
2	Partition 1
3	Partition 1
4	Partition 1
5	Partition 1
6	Partition 1
7	Partition 1

For example:to assign zone 1,2,3 to partition 1 and assign zone 4.5.6 to partition 2 as follow:

Enter the programmer's mode：[9 8 7 6][#][0]

Enter program address：[0 2 8 7]

Enter data digit01：[0]

Enter data digit02：[0]

Confirm：[#]

System automatically skip to[0288]

Enter data digit01：[1]

Enter data digit02：[1]

Confirm：[#]

5.6.3 Keypad Assignment Programming: Program Addresses

FC-7448 alary system can be distributed to 8 independent partitions and support 15 keypads. Keypad Assignment Programming is where you assign the keypad type and the partition it belongs to.

Note: when programming keypad, the keypad Number should match with the jumper address on PCB, refering to introduction on FC-7216K

5.6.4 Number of keypads and programming type（3131-31-38）

FC-7448 alarm system can be operated by one keypad or more keypads. If keypad are programmed to operate more than one partitions, one of the keypads can be assigned as master keypad. If using one partition, do not program keypads as Master Keypads. Every address from 3131 to 3138 can assign two keypads function，

Address	Data digit 1	Data digit 2
3131	Keypad 1	Keypad 2
3132	Keypad 2	Keypad 3
3133	Keypad 3	Keypad 5
. . .	. . .	. . .
3138	Keypad 15	0

D01 D02

Enter data	Select Option
0	No use
1	LCD Display
2	LED Display
3	LCD display& Master

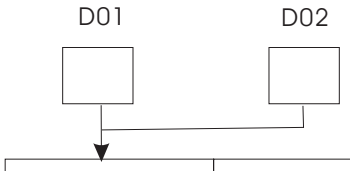
FC-7448 can be distributed to 8 partitions, every of which can be operated by one or more keypads

Programming address:[3139-3146]

Steps as following:

Address:

Address	Data digitl	Data digit2
3139	Keypad 1	Keypad 2
3140	Keypad 3	Keypad 4
3141	Keypad 5	Keypad 6
. . .		
3146	Keypad 15	0



Entering data	Functiion
0	Partition 1
1	Partition 2
2	Partition 3
3	Partition 4
4	Partition 5
5	Partition 6
6	Partition 7
7	Partition 8

Note: If there is only one Master keypad and control multiple partitions, and assign Master keypad to partition 1, the master keypad will display when other partiiton alarm but buzzer not sounding, although it can arm/disarm other partitions

2.6 Zone bypass Programming（2721-2724）

Zone Bypass programming determines which zone functions can be bypassed. Only zones whose function can be bypassed can be bypassed, other or, it can not be bypassed. 24 Hour Zones and Fire zones are not allowed to be bypassed.

Address	Digitl	Digital2
2721	Zone Functionl-4	Zone Function5-8

Address	Digitl	Data2
2722	Zone Function9-12	Zone Function13-16

Address	Digitl	Data2
2723	Zone Function17-20	Zone Function20-24

Address	Digitl	Digit2
2724	Zone Function25-28	Zone Function29-30

Program Address: （2721）

D01 D02

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone Func.1	●		●		●		●		●		●			●
Zone Func. 2	●	●			●	●			●	●			●	
Zone Func 3	●	●	●	●					●	●	●	●		
Zone Func 4	●	●	●	●	●	●	●	●						

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone Func.5	●		●		●		●		●		●			●
Zone Func 6	●	●			●	●			●	●			●	
Zone Func. 7	●	●	●	●					●	●	●	●		
Zone Func. 8	●	●	●	●	●	●	●	●						

Program Address: （2722）

D01 D02

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 9	●		●		●		●		●		●			●
Zone function 10	●	●			●	●			●	●			●	
Zone function 11	●	●	●	●					●	●	●	●		
Zone function 12	●	●	●	●	●	●	●	●						

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 13	●		●		●		●		●		●			●
Zone function 14	●	●			●	●			●	●			●	
Zone function 15	●	●	●	●					●	●	●	●		
Zone function 16	●	●	●	●	●	●	●	●						

Program Address: （2723）

D01 D02

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 17	●		●		●		●		●		●			●
Zone function 18	●	●			●	●			●	●			●	
Zone function 19	●	●	●	●					●	●	●	●		
Zone function 20	●	●	●	●	●	●	●	●						

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 21	●		●		●		●		●		●			●
Zone function 22	●	●			●	●			●	●			●	
Zone function 23	●	●	●	●					●	●	●	●		
Zone function 24	●	●	●	●	●	●	●	●						

Program Address: （2724）

D01 D02

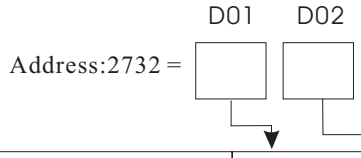
Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 25	●		●		●		●		●		●			●
Zone function26	●	●			●	●			●	●			●	
Zone function 27	●	●	●	●					●	●	●	●		
Zone function 28	●	●	●	●	●	●	●	●						

Bypassable zone	0	1	2	3	4	5	6	7	8	9	*0	*1	*3	*4
Zone function 29	●		●											
Zone function 30	●	●												

Note: 24 Hour Zone Function and Fire Zone Function can not be bypassed

5.6 Force Arming and Ground Fault Detect Programming: Program Address（2732）

Force Arming programming defines how many zones may be Force Armed using an Arming sequence followed by the [Bypass] key. With this entry, all violated zones (up the programmed limit) will automatically be Force Armed (bypass). Ground Fault Detect programming determines whether or not the control will detect a ground fault condition. The Maximum zones Number can be force armed is 9. If the function of Ground Fault Detect be programmed, keypad will display"Ground Fault".



Select Option	Data Digit
Do not allow Force Arming	0
Allow up to 1 zone to be force Armed	1
Allow up to 2 zones to be Force Armed	2
Allow up to 3 zones to be Force Armed	3
Allow upto 4 zones to be Force Armed	4
Allow up to 5 zones to be Force Armed	5
Allow up to 6 zones to be Force Armed	6
Allow up to 7 zones to be Force Armed	7
Allow up to 8 zones to be Force Armed	8
Allow up to 9 zones to be Force Armed	9

Data Digit	Select Option
0	Ground Fault Detect Off
1	Ground Fault Detect On

5.9 Entry/exit Delay Programming，Program Address：（4028--4030，4032--4033）

Entry Delay determines the system not alarm within delay period once the zone be triggered and not disarm(if programmed), until the delay period expires.

Exit Delay determines the system will not alarm within exit delay period until exit delay expires once he zones (except 24 Hour Zone and Fire Alarm) be triggered (if programmed)

Alarm bell time determines the time to output alarm followed by system alarming. Fire alarm time determines the time output alarm followed by system alarming.

FC-7448 has exit delay, entry delay 1 and entry delay 2, Fire alarm time and burglar alarm time. Program address is as follow:

1.Exit delay: two data digits determine time (5 seconds per unit),data should from [00-51] (0-255 seconds)Preprograned data is 12(60 seconds)

Exit delay	Data l	Data 2
Address 4030	1	2

2.Entry delay 1: two data digit determine time (5 seconds per unit), data should between [0—51]（0-255 seconds）Preprogrammed value is 09 (45 seconds).

Entry delay 1	Data l	Data 2
Address 4028	0	9

3.Entry delay 2：two data digits determine time (5 seconds per unit)，enter data from 0 to 51（0-255seconds)，Preprogrammed value is 09（45seconds）。

Entry delay 2	Data 1	Data 2
Address 4029	0	9

4.Fire alarm time ： two data digits determine time(one minute per unit), enter data 0-99（0—99minute)，Preprogrammed value is [04](4 minutes).

Fire alarm time	Data1	Data 2
Address 4302	0	4

5.Burglar alarm time：two data digits determine time (one minute per unit), enter data [0—99]（0—99minute）Preprogrammed value is [04](4 minutes)，

Burglar alarm time	Data 1	Data 2
Address 4033	0	4

5.10 Arming Warning Programming: Program Address（3425--3428）

Arming Warning programming defines whether the keypad will be audible during the exit delay auto arm period. If programmed, the keypad sounder and 5 seconds remaining, the keypad sounder will active 3 times. During auto arming, a pre-arming period will begin 15 minutes before the system arms automatically. The keypad sounders will pulse five times every minute. During the last five minutes before arming, these sounders will be on steady. ：

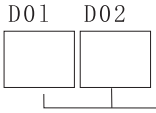
Address	Data 1		Data 2	
3425	Partition 1	No keypad sounder 0	Partition 2	No keypad sounder, enter 0
		Keypad sounder4		Keypad sounder, enter 4
3426	Partiition 3	No keypad sounder 0	Partition 4	No keypad sounder, enter 0
		Keypad sounder4		Keypad sounder, enter 4
3427	Partition 5	No keypad sounder0	Partition 6	No keypad sounder, enter 0
		Keypad sounder 4		Keypad sounder, enter 4
3428	Partition 7	No keypad sounder0	Partition 8	No keypad sounder, enter 0
		Keypad sounder4		Keypad sounder, enter 4

Note: The factory default is [0] with no keypad sounder during Exit delay 。

5.11General Code Programming: Program Address（3421--3424）

This allows for a user with a General Authority level to Arm/disarm and Bypass specified zones

Address	Data 1	Data 2
3421	Partition1	Partition 2
3422	Partition3	Partition 4
3423	Partition5	Partition 6
3424	Partition7	Partition 8



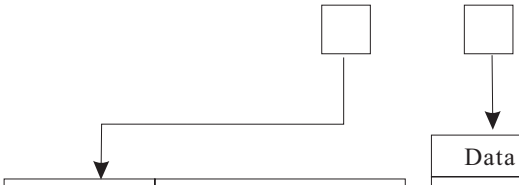
Select Option s	Data
Arm/disarm/ bypass	0
Arm and Bypass	1
Disarm and bypass	2
Arm only	3

5.12 Assistant Bus Output Programming: Program Address（4019—4020）

Assistant Bus Output is necessary when connect control panel with PC or serial printer (FC-7232) or relay output module. This defines the speed of assistant output, the character of data flow etc.

9.1It determines whether use FC-7232 to send out events

Address 4019 = D01 D02



Data	Select options
0	Not use FC-7232
1	Use FC-7232

Data	Select Options
0	Not send events
1	Send alarm, malfunction and reset information
2	Send out Arm/disarm information
3	Send out alarm, malfunction, reset, arm/disarm
4	Other events
5	Send out alarm, malfunction, reset and other events
6	Send out Arm/disarm and other information
7	All events
8	Connect withFocus7000 manage software

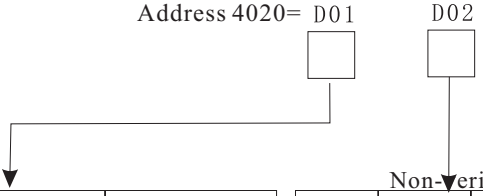
★Other events is： something except alarm, malfunction, reset, arm/disarm

Note: Address[4019] default is [07], it means not using FC-7232。

5.12.1Data Flow Character Programming

If connect FC-7232 with PC or printer， or use relay output module, it is necessary to determine the speed of data flow and other characteristics

Address 4020= D01 D02



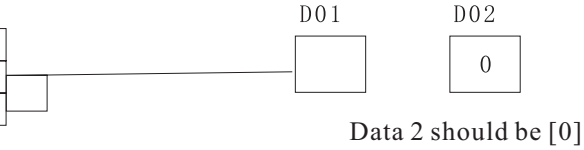
Data	Select options
0	300Baud
1	1200Baud
2	2400Baud
3	4800Baud
4	9600Baud
5	14400Baud

Data	Non-verification Code	Odd verify	Event verify	Software	Hardware	1stop	2stop	8digit
0	◆				◆	◆		◆
1	◆			◆		◆		◆
2	◆				◆		◆	◆
3	◆			◆			◆	◆
4		◆			◆	◆		◆
5		◆		◆		◆		◆
6			◆		◆	◆		◆
7			◆	◆		◆		◆

Note:the value on Address[4020] should be compatible with PC or printer

Printer Enter/ Newline Command

Select Options	Data
Send Enter/Newline command	0
Send Blank Command	1



Data 2 should be [0]

5.13 Programmer's and Master Code Programming

FC-7448 default for the Programmer' code is 4-digit, the maximum is 6-digit. Default for Master Code is 4-digit, the maximum is 4-digit.The 4-digit is [1234], and the 6-digit is [123456].

5.13.1Modifying Programmer Code（7589）

Address7589	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6
Default	9	8	7	6	5	4

When programming, the Entry Address is [7589], enter any of 4-digit data
For example: Set“235691”as programmer code as following:
Enter Programmer'mode：[9 8 7 6][#][0]
Enter Program Address：[7589]
Enter Data：[2][3][5][6][9][1]
Confirm：[#]

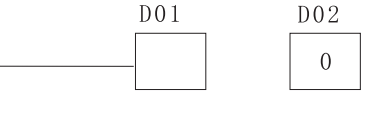
5.13.2 Changing Master Code

Address7592	Data1	Data 2	Dats 3	Data 4	Data 5	Data 6
Default	9	8	7	6	5	4

When programming, the Entry Address is [7592]，enter any of 4(6)-digit data.
For example: set“656565”as programmer'code as following:
Enter Programmer'Mode：[9 8 7 6][#][0]
Enter Program Address：[7589]
Enter Data:[2][3][5][6][9][1]
Confirm：[#]

5.13.3 Set Master Code length(3478)

Select options	Data
4-Digit	0
6-Digit	1



5.14. Telephone Alarm Warning Programming

FC-7448 has the function to connect with alarm receiving centra, support with 3+1, 4+1, BFSK Contact ID，SIA protocol。It enables connecting with D6500,D6600 and other brands Alarm Communicator. Following shows the details of net-linking alarm：

★Telecom format：Alarm Receiving Centre adopts Contact ID, OR 4+2Dor 4+2 plus, or other format which can be compatible with central

★Centra Telephone Number：It defines whether dual radio frequency dialing or pulse dialing when alarm.

★User Code：it means the code for each 8 partitions of FC-7448

★Data transmitting Method：FC-7448 has two method of transmitting alarm, one is telephone alarm

★Report Code：Each telecom format has its own alarm report code, in order to master programming method, here we introduce two normal telecom format such as Contact ID, 4+2 ID

Contact Id is a universal alarm telecom format, whose alarm code is fixed, and there is no need to set or change. 4+2 ID is an open format which user can define codes. The code consists of 4-digit user code, 1-digit zone code and 1-digit alarm type code. When using FC-7448, Contact ID is popular.

5.14.1 Alarm Telephone Programming（3159、3175、3191）

There are three telephone numbers can be programmed: the first and the second is alarm receiving telephone, and the third is the telephone for remote programming. The two alarm telephone can be used to dial to two different Alarm Receiving Centra. If dialing to different Centra, users can alarm to the first Alarm Receiving Centra by the first telephone number, then alarm to the second Alarm Receiving Centra by the second telephone number. If the two telephone are in the same centra, then the alarm will dial the first number, if it is busy, then dial the second number.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
The first telephone number, Address：3159																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
The first telephone number, Address：3175																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
The third telephone number, Address：3191																

For example: set “02783681678” as the first Alarm Receiving Telephone number as follow:

Enter Programmer’ mode：[9 8 7 6][#][0]

Enter Program Address：[3159]

Enter Data：[0][2][7][8][3][6][8][1][6][7][8]

Confirm：[#]

Note: The method of using Alarm Receiving Telephone is the same of usual telephone, if the communicator connected the internal extensive number it need to add out code; if dial a long distance number it needs to add zone number but need for local number. And if dial long distance cell phone it needs to add “0”before the number

The terminal when dialing: enter *3 then it will stop for 3 seconds

If need to wait for dialing indication, enter *4; if one data enter incorrectly, enter*5. Delete the data and then enter it again.

5.14.2Determine Telecom Format and Clasping （3156--3157）

Clasping means the centra will send out command that can receive alarm data to control panel FC-7448 has many kinds of telecom format, each of which has its own clasping. According to compatible format control panel can receive, user can choose other format such as address 3156 to determine the format and clasping of the first telephone, and address 3157 determines the se cord telephone.

3156	Data1	Data 2
3157	Data 1	Data 2

Data	Telecom Format）
0	Invalid
6	4+2
9	Contact ID
*5	Calling

Data	Clasping
0	1900Hz/2400Hz, 10 impluse/sec
1	Contact ID
2	1900Hz/2400Hz,20 pulse per second
3	1800Hz/2300Hz,20 pulse per second

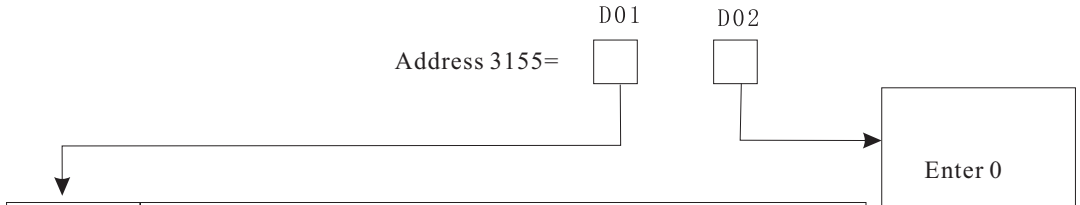
Data1 for telecom format, and Data 2 for clasping，the default is 00。

For example：if use Contact Id，data should be 91。Note：if use Contact Id and the data digit is not 00, it can send report, other or it can send out. If use 4+2, the data should be 60 or 62.

Note: the alarm code should be consistent with alarm centra, and it can send out information when the data is 00. Generally, it will convenient for user to adopt 4+2 format.

5.14.3 Phone Number General Control Programming: Program Address(3155）

This is to program dialing by phone, there are two main factors: to determine whether enables the Remote Programmer Call-back feature; to dial pulse or dual frequency or pulse and dual frequency compatible Program Address is [3155]



Data	Select Option
0	Send pulse report
1	Dial pulse and enable Remote Programmer Calll back
2	Dial pulse and frequency
3	Dial pulse and frequency and enable remote Programmer Call back
4	Dial frequency
5	Dial frequency and enable remote programmer call back

5.14.5 To Program User's Code : Program Address（3429—3459）

There are 8 partitions, each of which has a independent code, if connected with alarm centra, it will display the as partition 1 if FC-7448 without partition. If FC-7448 has independent partition ,then it will display its code, the default for every partition is [0000], which means that not send the report of the partition.

Each partition has two groups of 4-digit code which is used to program two telephone numbers to dial to two alarm centras. So every partition can send out report to one alarm centra or two alarm centras. The Progarm Address as follow:

Note: (1)the data should be from left to right, if data is 3-digit , and the fourth digit should be 0, for instant, if the data is 123, you need to enter as [1230]

(2) if one of the data is 0, you need to enter *0 instead of 0, for instant, the data is [3050], then you need to enter [3*05*0] instead.

			Data 1	Data 2	Data 3	Data 4
Partition1	Number1	Address3429				
	Number2	Address3431				
Partition2	Number1	Address3433				
	Number2	Address3435				
Partition3	Number1	Address3437				
	Number2	Address3439				
Partition 4	Number1	Address3441				
	Number2	Address3443				
Partition 5	Number1	Address3445				
	Number2	Address3447				
Partition6	Number1	Address3449				
	NUMBER2	Address3451				
Partiton7	Number1	Address3453				
	Number2	Address3455				
Partiton8	Number1	Address3457				
	Number2	Address3459				

5.14.5 Peport Access Programming: Progarm Address (3153--3154)

There are several methods of sending report such as by telephone line, by wireless, by data port etc. It also need to determine dialing attempts. Here we just introduce report programming by telephone, so it just need to enter [11] at address [3153], and enter the following data s showing on the diagram at address [3154]

	Data 1	Data 2
Address 3153	Enter 1	Enter 1

	Data 1	Data 2
Address 3154	Enter 1	

Data	Attempts	Data	Attempts	Data	Attempts	Data	Attempts
0	No dial	4	4	8	8	*2	12
1	1	5	5	9	9	*3	13
2	2	6	6	*0	10	*4	14
3	3	7	7	*1	11	*5	15

5.15.Alarm Report Choosing Programming: Program Address（3149）

To determine Arm/Disarm report sending option, and zone alarm report coptione.

5.14.1 Arm/Disarm Report Sending Option

Each of partition can arm/disarm independently, so it needs to determine whether send out arm/disarm information and report at the following address[3149], the default is [40]

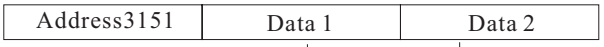
Address3149	Data 1	Data 2

Data	Select Option
0	Not send arm/disarm report
1	Send arm/disarm report on partition1
2	Send arm/disarm report on Partition 1-2
3	Send arm/disarm report on partition1-3
4	Send arm/disarm report on partition1-4
5	Send arm/disarm report on partition
6	Send arm/disarm report on partition1-6
7	Send arm/disarm report on partition1-7
8	Send arm/disarm report on partition1-8

Data	Select Option
0	Not send bypass trouble report when disarm
1	Send bypass trouble when disarm

5.15.1Arm/disarm report and zone report option: Program Address（3151）

To determine arm/disarm report and zone alarm report, zone reset report violated zone report sending option



Data	Select Optiion
0	Send the first number, the second is for backup
1	Send the first number
2	Send the second number
3	Send both the first and the second numbers

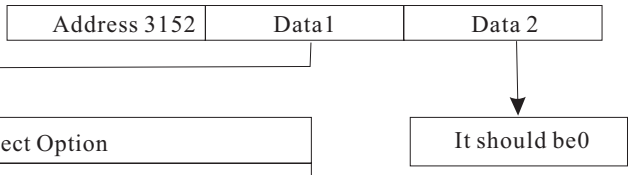
Data	Select Option
0	Send the first number, the second is for backup
1	Send the first number
2	Send the second number
3	Send both the first and the second number

Note:1. the first data determine arm/disarm report,

2. the second data determine zone alarm, reset and malfunction report

5.15.2 Other reports option: Program Address（3152）

To determine other reports option besides the reports programmed at address[3149]



Data	Select Option
0	Send the first number, the second is for backup
1	Send the first number
2	Send the second number
3	Send the first and the second numbers

5.16 Events Report Code: Program Address（3207--3419）

Any of alarm control panel connected with alarm centra sending alarm information is alarm type code, then the receiver translate the alarm type code into alarm signal. So every alarm type has a fixed address to express, for example:

Address	Select Option	Data1	Data2
3209	Zone function 1 alarm report		

Data1:Alarm Code Data Digit Data2: Alarm Code Data Expansion

Pay attention to the following situation when programming：

◆ if send the user code with arm/disarm information, it needs to fill “5” on the expansion digit of arm/disarm report

◆ if choose not to send some alarm type information, it needs to fill “00” at its address

◆ if use Contact Idand choose to send some alarm type, it needs to fill “1” at its address, no matter its expansion digit. Or it should fill “00”

◆ if enter A, B, C, D, E, F, *0=A, *1=B, *3=D,*4=E, *5=F

If use 4+2，the data digit and expansion digit is open, user can set it as needed. But it should be consistent with alarm receiving centra, other or it will send wrong report. If Arm Report is B0, the code B0 in alarm type programming should be arm report. Contact ID is fixed, it need not to set another code. The default as follow chart.

Keypad Fire Alarm	3207	0	0	AC Fail	3338		
Keypad Fire Restoral	3208	0	0	AC Restral	3339		
Zone Func.1 Alarm	3209	1	0	Comm. Test/System Normal	3340		
Zone Func.2 Alarm	3210	2	0	Remote Pro. Successful	3341		
Zone Func.3 Alarm	3211	3	0	Remote Pro. Unsuccessful	3342		
……	……	……	0	Local Pro. Successful	3343		
Zone Func.28 Alarm	3236	0	0	Local Pro. Unsuccessful	3344		
Zone Func.29 Alarm	3237	0	0	System Trouble	3345		
Zone Func.30 Alarm	3238	0	0	System Trouble Restoral	3346		
Keypad Emergency	3239	0	0	System Test Unnormal	3347		
Panic Alarm	3240	0	0	Exit Error	3348		
Zone Func.1 Restral	3241	0	0	Recent Closing	3349		
Zone Func.2 Restral	3242	0	0	System Test	3350		
……	……	0	0	System Test Restral	3351		
Zone Func.29 Restral	3269	0	0	Fie Walk Test	3352		
Zone Func.30 Restral	3270	0	0	Fire Walk Test Restral	3353		
Zone Func.1 Trouble	3271	0	0	Mux Low Temperature	3354		
Zone Func.2 Trouble	3272	0	0	Low Temperature Restral	3355		
……	……	0	0	Sensitivity Trouble	3356		
Zone Func.29 Trouble	3299	0	0	Sensitivity Trouble Restral	3357		
Zone Func.30 Trouble	3300	0	0	Zone Func.1 Bypass	3358		
Zone Func.1 Restral1	3301	0	0	Zone Func.2 Bypass	3359		
Zone Func.2 Touble Restral	3302	0	0	……	……		
……	……	0	0	Zone Func.29 Bypass	3386		
Zone Func.29 Trouble Restral	3329	0	0	Zone Func.30 Bypass	3387		
Zone Func.30 Trouble Restral	3330	0	0	Zone Func.1 Bypass Restral	3388		
Arm	3331			Zone Func.2 Bypass Restral	3389		
Disarm	3332			……	……		
Duress	3333			Zone Func.29 Bypass Restral	3416		
Partial Close	3334			Zone Func.30Bypass Restral	3417		
First Open After Alarm	3335			Keypad Temper	3418		
Low Battery	3336			Keypad Temper Restral	3419		
Battery Restral	3337						

Chapter6 Troubleshooting Guide

6.1 Keypad Problems

Symptom	Probable Cause	Possible Solution
Entry Error:： “please re-enter” will display on keypad. A three beep error tone will sound continuously	Two or more keypads share the same address	Install keypad jumper properly in back of keypad
Keypad displays"Not programmed, see install Guide)”sounder is on and the keypad does not operate	1.Keypad address is incorrect 2.Keypad11-15 is not programmed properly	1.Install the keypad jumper properly in back of keypad 2.Check the keypad addresses 11-15. System will only see keypads on the options bus
Keypad displays “ ready to arm, partition 1” when using only one partition	The keypad is programmed as a Master keypad	Master keypad can only be used on multi-partition systems. Program the keypad as a standard keypad
The keypad willdiaplay “system fault”, sounder is on, and the keypad does not operate	1.Keypad is wiring error 2.Keypad assigned to wrong or nonexistent partition 3.The microprocessor is not running	1.Check wiring 2.Assign the keypad to correct partition. If none of the keypads are correctly assigned, re-enable keypad1 by shorting the program contacts in the lower right corner of the main panel board. This will force program mode and assign keypad1 as alpha, non-master to partition1
Keypad display is locked up, but the keys still function	The keypad is enabled, but as an LED keypad	Enter the program mode at the keypad and input the correct sequence to re-enable it as an alpha keypad. Care must be taken, since there will be no visual feedback to verify programming until the keypad is properly enabled.
Can’t read back distory with#89 input	1.Entering from master keypad 2.Not using a PIN with test authority	1.Enter single partition mode 2.Using a PIN with test authority

Symptom	Probable Cause	Possible Solution
Can't read back history with #81 input	1Enrering from master keypad 2.Not using a PIN with test authority	1.Zone test is not available from a Master keypad 2.Using a PIN with test authority
Chime Mode does not work when a zone is faulted	1.Not activating for interior zones 2.The keypad is not assigned to the same partition as the zone being activating	1.Chime mode only activates for interior zones. Chime mode must be programmed. Also, if the perimeter zone has trouble enabled, the chime won't work if that zone is opening. 2.Chime mode can only activated the sounder on keypads that are assigned to the same partition as the zone
Some functions won't work on a Master Mode	Some functions require you to enter single partition mode when using a Master Mode	The following commands require that you are in Single Partition Mode when entering from a Master Mode ● History read-back ● Chime Mode ● Checking zone status ● Check zone trouble status，Master keypad will show only partition name ● Bypassing zone

6.2 Zone Problem

Symptom	Portable Cause	Possible Solution
Zone9 and above show "Not Ready. Zone Trouble"	1.The multiplex expansion module is not installed correctly 2.The multiplex expansion module wiring is missing or is not installed properly 3.8-input remote module DIP switches are not set properly 4.Bus locking code is set not properly or not programmed into module 6.Zone is programmed incorrectly 7.Not program multiplex module。	1.Make sure the multiplex expansion module tis seated properly in the upper pins on the FC-7448 circuit borad 2.Check wiring and perform a system reset 3.Correctly set DIP switches for the 8-input remote module 4.Bus locking code can not be used with 8-input remote modules.If using 8-input modules, remove the code 5.Assign the switch and sensor as Single Zone input 6.Program the module
Keypad display "Fire Alarm"，but does not indicate any zone	On commercial Fire Mode alarm signal should be stopped before displaying zone number	Enter a valid user PIN for disarm followed by "#" to display the zone number

Symptom	Probable Cause	Possible Solution
Other zone display "Not Ready"	Zone Programming is incorrect	Assign FC-7430 as multi-zone inputting
Invisible and silent zone activates alarm output	The output is programmed as "latch on alarm" (0)	Program the output to follow zone alarms (6)
Keypad display "(Fire Trouble)" but not indicate any zones.	A ground fault condition exists	See system trouble: Ground default
Invisible zone display "(Not Ready)" but no zone number is displayed	The operation is correct and display "Not ready to arm" but not display alarm signal.	

6.3 General System Problem

Symptom	Probable Cause	Possible Solution
Program the systemvalue as default	Enter [01]at address 4058	Caution: Only enter a value of 01 in address 4058 when you are sure you want to default the programming. Doing so will immediately erase all the programming
Power LED is flashing, keypad displays Control Trouble Press# 87	Control Trouble exists	Press #87 to determine the trouble condition
# 89 display= System Fult01 # 87 display= System Fault02 # 87 display= EEPROM Fault # 89 display= System Fault03		1.An EEPROM Fault can be caused by disconnecting power from the control while it is in program mode. In this case, enter then exit program mode to clear, 2.Try to clear the error at the keypad by entering a PIN then Reset. 3.Remove AC power and battery power, then re-apply. Remember that event history will be lost and time/date will have t o be reset 4.If error persist, return the panel to factory default programming by setting program address 4058 to"01". If the error clears, re-program the panel. 5.If error still persists, replace the panel

Symptom	Probable Cause	Possible Solution
#87 display= Multiplex Bus Trouble	Multiplex Bus is detective or shorted	Check the short wiring
#87 display = Communication Error #89 display= Report Failure X	The control has failed to communicate.	Check history #89 to determine the source. Report Failure 1= Phone number 1. Report Failure 2= Phone number 2
Can not restral to default	Program the keypad process as PARTIAL.	Program the remote program as FULL.
#87 display= Line 1 Fault #89 display= (System Fault 11)	There is a phone line fault on line1	Check phone line 1 for proper operation
#87 display = Line 2 Fault #89 display = System Fault 12	There is a phone line fault on line2	Check phone line 2 for proper operation If you wish to monitor only one phone line, reprogram address 3159.
#87display = Ground Fault #89 display= System Fault 04	There is a short to ground somewhere in the system	Disconnect field wiring from each terminal while watching the keypad display. When the keypad power LED stops flashing, you have found the wire that is causing the ground fault. Note: The LED will not stop flashing if there is another system fault resent If there is no keypad nearby, or another control problem exists, you can use a volt-meter to find the ground fault. 1. Connect the negtive lead of a volt-meter to the panel ground terminal 2. Connect the positive terminal to the AUX Power terminal You should read -4.5 to -7.5volt DC. A reading considerably higher or lower indicates a ground fault Disconnect field wiring from each terminal while watching the meter. When the voltage reading returns to between -4.5 and -7.5 vdc, you have found the wire that is causing the ground fault

Symptom	Probable Cause	Possible Solution
#87 display= AR IB Queue Fult #89 display = System Fault 51	The message queue in the IS modem is full and no message can get out to the radio network	Check Radio Frequency coverage of the uni t and check for therefore noisy enviement
#87 display= AR Host Down #89 display= System Fault 52	The central station receiver has ceased to be available to the network	Contact the central station and notify of status
#87 display = Battery Fault	1. The battery failed a battery test 2. Battery is defective 3. The wiring to the battery is disconnected	1.If there has just been a power failure, wait at least two hours for the battery to recharge then perform a system Reset to re-test the battery and clear the error 2.Replace the battery 3. Check wiring
#87 display = Keypad Fault	1.The keypad wirig is defective. 2.Keypad is missing.	1.Check keypad operation and wiring . 2.Install keypad.
#87 display = Aux Power Fault	The auxiliary power output has been shorted	Remove the auxiliary power and check for shorts
#87 display= Zone Trouble	1.A zone is not responding to the control panel 2.The zone is programmed for (Trouble On Open) and the loop is open	1.Check the wiring to the zone. 2. If the zone is not to be used, remove from programming. 3.If using normally closed contacts, re-program zone for alarm on open. 4.If using Normally Open contacts and trouble on open is desired, check for opens in the loop. Remove wiring and place an EOL resistor across the zone to eliminate a problem with the control If the trouble goes away, the problem is in the wiring or in a contact connect to the zone.

Symptom	Probable Cause	Possible Solution
#87 display = AC Power Failure	The control panel use backup battery when AC power fais. Check if the general power fails, or, it will be the reason as follow:: 1.The transformer is unplugged. 2.The wiring from transformer is defective 3. The circuit to the transformer is off or defective 4. The transformer is defective. 5.In some cases, the transformer may be connected to a circuit controlled by a switch or a circuit breakerthat is periodically turned off	1.Plug the transformer in. 2.Check the wiring 3.Check the circuit and circuit breaker. 4.Repace the transformer. 5.Connect to a circuit that is not controlled this day
Fire trouble	1.Zone trouble. 2.If AC power fails, it need to force arm	1.Find out the probable cause and cancel the displaying zone trouble. 2Enter arm command and press during the period of sounding.
Fire Alarm display “000” Fire Trouble, no zone number.	The Fire Alarm was caused by the A key. Fire zone wiring problems.	If you try to disable thezone by reprogramming it, you need to reset the control by either entering then exiting programmer mode, or removing then restoaing power to the control panel